

**6BF5****BEAM POWER AMPLIFIER**

MINIATURE TYPE

**6BF5****GENERAL DATA****Electrical:**

Heater for Unipotential Cathode:

Voltage . . . . . 6.3 . . . . . ac or dc volts

Current . . . . . 1.2 . . . . . amp

Direct Interelectrode Cap. (Approx.; no external shield):

As Beam Power Amplifier:

Grid No.1 to Plate . . 0.65 . . . . .  $\mu\mu\text{f}$ Input . . . . . 14 . . . . .  $\mu\mu\text{f}$ Output . . . . . 6 . . . . .  $\mu\mu\text{f}$ **Characteristics as Beam Power Amplifier:**See AMPLIFIER--Class A<sub>1</sub>**Characteristics as Triode-Connected Amplifier--Class A<sub>1</sub>:**

(Grid No.2 connected to plate)

Plate Voltage . . . . . 225 volts

Grid Voltage . . . . . -30 volts

Amplification Factor . . . . . 6.7

Plate Resistance . . . . . 2500 ohms

Transconductance . . . . . 2700  $\mu\text{mhos}$ 

Plate Current . . . . . 10 ma

Grid Voltage (Approx.) for plate

current of 0.5 ma . . . . . -40 volts

**Mechanical:**

Mounting Position . . . . . Any

Maximum Overall Length . . . . . 2-5/8"

Maximum Seated Length . . . . . 2-3/8"

Length, Base Seat to Bulb Top (Excluding tip) . . 2"  $\pm$  3/32"

Maximum Diameter . . . . . 3/4"

Bulb . . . . . T-5-1/2

Base . . . . . Small-Button Miniature 7-Pin (JETEC No.E7-1)

Basing Designation for BOTTOM VIEW . . . . . 7BZ

Pin 1-Grid No.1

Pin 2-Cathode,  
Grid No.3

Pin 3-Heater



Pin 4-Heater

Pin 5-Plate

Pin 6-Grid No.2

Pin 7-Grid No.1

**AMPLIFIER--Class A<sub>1</sub>****Maximum Ratings, Design - Center Values:**

PLATE VOLTAGE . . . . . 250 max. volts

GRID-No.2 (SCREEN) VOLTAGE . . . . . 117 max. volts

PLATE DISSIPATION . . . . . 5.5 max. watts

GRID-No.2 INPUT . . . . . 1.25 max. watts

OCT. 1, 1953

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA

6BF5



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## BEAM POWER AMPLIFIER

### PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode .	200 max.	volts
Heater positive with respect to cathode .	200 <sup>■</sup> max.	volts

### Typical Operation and Characteristics:

Plate Voltage . . . . .	110	volts
Grid-No.2 (Screen) Voltage . . . . .	110	volts
Grid-No.1 (Control-Grid) Voltage . . . . .	-7.5	volts
Peak AF Grid-No.1 Voltage . . . . .	7.5	volts
Zero-Signal Plate Current . . . . .	36	ma
Maximum-Signal Plate Current . . . . .	39	ma
Zero-Signal Grid-No.2 Current . . . . .	4	ma
Maximum-Signal Grid-No.2 Current . . . . .	10.5	ma
Plate Resistance (Approx.) . . . . .	12000	ohms
Transconductance . . . . .	7500	μmhos
Plate Load Resistance . . . . .	2500	ohms
Total Harmonic Distortion . . . . .	10	per cent
Maximum-Signal Power Output . . . . .	1.9	watts

### VERTICAL DEFLECTION AMPLIFIER

*Triode Connected--Grid No.2 Connected to Plate*

### Maximum Ratings, Design-Center Values Except as Noted:

*For operation in a 525-line, 30 frame system\**

DC PLATE VOLTAGE . . . . .	250 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE† . . . . .	900 <sup>o</sup> max.	volts
CATHODE CURRENT:		
DC . . . . .	40 max.	ma
Peak . . . . .	120 max.	ma
PLATE DISSIPATION†† . . . . .	5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	200 max.	volts
Heater positive with respect to cathode .	200 <sup>■</sup> max.	volts

### Maximum Circuit Values:

Grid-No.1 Circuit Resistance:	
For cathode-bias operation . . . . .	2.2 max. megohms

- The dc component must not exceed 100 volts.
- As described in "Standards of Good Engineering Practice for Television Broadcast Stations", Federal Communications Commission.
- † The duration of the voltage pulse must not exceed 7 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 7 per cent of one vertical scanning cycle is 1.2 milliseconds.
- under no circumstances should this absolute value be exceeded.
- †† An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

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